

A TIMESTAMPING NETWORK CONTROLLER  
FOR STREAMING MEDIA APPLICATIONS

**ABSTRACT**

A system and method of end-to-end clock recovery for media streaming. The method including inspecting a data packet sent by an application to determine a protocol type of the data packet and a location of a timestamp field in the data packet. If the data packet matches a pre-determined protocol type, a new timestamp is generated and inserted into the timestamp field of the packet in real-time in place of an original, possibly less reliable timestamp. The new timestamp accurately defines the time of transmission of the data packet. The data packet is transmitted over a network to a receiver. A receiver receiving the data packet, inspects the received data packet to determine whether the received data packet matches an identification criterion. If the received data packet matches the identification criterion, the receiver generates a local timestamp in real-time and processes the local timestamp and the new timestamp from the received packet to determine an error signal. The error signal is used to adjust the local clock within the receiver.